AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-135 (Canceled).

136. (Currently Amended) A method to measure or detect an interaction between components of liquid sample formulations, comprising:

a) preparing an array of liquid samples, wherein:

1) each sample comprises a component-in-common and one or more additional components, each sample varying in the identity of the one or more additional components or varying in the ratio of the volume of component-in-common to the volume of the one or more additional components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated system that adds and mixes the components of each sample under software control,

b) testing each sample for a property to generate a data set, and

c) analyzing the data set using data mining algorithms to measure or detect an interaction between components of the sample formulations, said interaction being increased solubility of the component-in-common.

Claims 137-139 (Canceled).

140. (Previously Presented) The method of claim 139 wherein the component-in-common is a pharmaceutical.

Claims 141-144 (Canceled).

145. (Previously Presented) The method of claim 136 wherein the each sample of the array comprises less than 100 μg of the component-in-common.

146. (Previously Presented) The method of claim 136 wherein the each sample of the array comprises less than 100 ng of the component-in-common.

147. (Previously Presented) The method of claim 136 wherein each sample of the array has a total volume between 150 and 200 μl.

Claims 148-149 (Canceled).

150. (Previously Presented) The method of claim 136 wherein the sample testing is performed at a rate greater than or equal to 1000 formulations per day.

Claim 151 (Canceled).

152. (Previously Presented) The method of claim 136 wherein the data set is processed through data mining algorithms to detect complex multi-dimensional interactions between components.

153. (Previously Presented) The method of claim 136 wherein the data set of processed through data mining algorithms to detect a lack of interactions between components.

154. (Previously Presented) The method of claim 136 wherein the data set is processed through data mining algorithms to identify samples for future formulation experiments.

155. (Currently Amended) A method to measure or detect a synergistic interaction between pharmaceutical components of liquid sample formulations, comprising:

a) preparing an array of liquid samples, wherein:

1) each sample comprises a pharmaceutical component-in-common, one or more additional pharmaceutical components, and one or more additional excipient components, each sample varying in the identity of the additional one or more pharmaceutical and excipient components or varying in the ratio of the volume of pharmaceutical component-in-common to the volume of the additional one or more pharmaceutical and excipient components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated system that adds and mixes the components of each sample under the control of software,

b) testing each sample for a property to generate a data set, and

c) analyzing the data set using data mining algorithms to measure or detect a synergistic interaction between components of the sample formulations, said interaction being increased solubility of the component-in-common.

Claims 156-160 (Canceled).

161. (Previously Presented) The method of claim 155 wherein the each sample of the array comprises less than 100 μg of the component-in-common.

162. (Previously Presented) The method of claim 155 wherein the each sample of the array comprises less than 100 ng of the component-in-common.

163. (Previously Presented) The method of claim 155 wherein each sample of the array as a total volume between 150 and 200 μl.

Claims 164-165 (Canceled).

166. (Previously Presented) The method of claim 155 wherein the sample testing is performed at a rate greater than or equal to 1000 formulations per day.

167 (Previously Presented) The method of claim 155 wherein the data set is analyzed to arrive at optimized formulations and interactions.

168. (Previously Presented) The method of claim 155 wherein the data set is processed through data mining algorithms to detect complex multi-dimensional interactions between components.

169. (Previously Presented) The method of claim 155 wherein the data set is processed through data mining algorithms so as to detect a lack of interactions between components.

170. (Previously Presented) The method of claim 155 wherein the data set is processed through data mining algorithms so as to identify samples for future formulation experiments.

171. (Previously Presented) The method according to claim 155, wherein each sample comprises at least three excipients selected form the group consisting of: acidulents; solubilizing

components; absorbents, alkalizing components; anticaking components; antimicrobial components; antioxidants; binders; buffering components; chelating components; coating components; controlled release vehicles; detergents; emollients; emulsifying components; flavoring components; humectants; lubricants; solvents; stabilizing components; tonicity components; binders; fillers; and mixtures thereof.

172 (Previously Presented) The method according to claim 136, wherein each sample comprises at least three components selected from the group consisting of: acidulents, solubilizing components; absorbents; alkalizing components; anticaking components; antimicrobial components; antioxidants; binders; buffering components; chelating components; coating components; controlled release vehicles; detergents; emollients; emulsifying components; flavoring components; humectants; lubricants; solvents; stabilizing components; tonicity components; binders; fillers; and mixtures thereof.

173. (Previously Presented) The method according to claim 136, wherein said component-in-common is paclitaxel (taxol).

174. (Previously Presented) The method according to claim 155, wherein said component-in-common is paclitaxel (taxol).

175. (Previously Presented) The method according to claim 136, wherein said array is analyzed using a UV spectrometer.

176. (Previously Presented) The method according to claim 155, wherein said array is analyzed using a UV spectrometer.

177. (Previously Presented) The method according to claim 174, wherein the solubility of said component-in-common is analyzed using a UV spectrometer.

178. (New) The method according to claim 136, wherein each sample comprises liquid paclitaxel, polyethylene glycol and one or more additional components, each sample varying in the identity of the one or more additional components or varying in the ratio of the volume of paclitaxel to the volume of the one or more additional components, said array is dispensed by an automated dispensing system, and said samples are analyzed by UV spectroscopy.

179. (New) A method to measure or detect an interaction between components of liquid sample formulations, comprising:

a) preparing an array of liquid samples, wherein:

1) each sample comprises liquid paclitaxel, polyethylene glycol and one or more additional components, each sample varying in the identity of the one or more additional components or varying in the ratio of the volume of paclitaxel to the volume of the one or more additional components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated dispensing system that adds and mixes the components of each sample under software control,

b) testing each sample for increased solubility via UV spectroscopy to generate a data set, and

c) analyzing the data set using data mining algorithms to measure or detect an interaction between components of the sample formulations, said interaction being increased solubility of paclitaxel.

180. (New) A method to measure or detect a synergistic interaction between pharmaceutical components of liquid sample formulations, comprising:

a) preparing an array of liquid samples, wherein:

1) each sample comprises paclitaxel, polyethylene glycol and one or more additional pharmaceutical components, and one or more additional excipient components, each sample varying in the identity of the additional one or more pharmaceutical and excipient components or varying in the ratio of the volume of paclitaxel to the volume of the additional one or more pharmaceutical and excipient components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated dispensing system that adds and mixes the components of each sample under the control of software,

b) testing each sample for increased solubility to UV spectroscopy to generate a data set, and

c) analyzing the data set using data mining algorithms to measure or detect a synergistic interaction between components of the sample formulations, said interaction being increased solubility of paclitaxel.